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Comparative Analysis of Battery with Lithium-Ion Battery for Renewable Energy Storage

Mrs. Priyanka Chawhan[1], Prof. A. V. Harkut[2], Prof. P. R. Jawale[3]
PG Scholar, Department of Electrical (Electronics & Power) Engineering, PLIT&MS, Buldana, India [1]
Assistant Professor, Department of Electrical (Electronics & Power) Engineering, PLIT&MS, Buldana, India[2,3]

Abstract: *A battery is essential for the renewable and sustainable development of electrical and electronic technology. This Lithium-ion has been focused and described based on a comparative analysis of various types of batteries such as Lithium-ion batteries, electro-chemical batteries, fuel cells batteries, and solar cells batteries. In contrast, electrochemical batteries are widely used in the current scenario for renewable and sustainable development, but they have some drawbacks such as limited life, leakage, and environmental concerns. Fuel cell batteries, on the other hand, are expensive and not portable in size. Similarly, solar cell batteries are not adaptable and versatile in emergency power backup. To address emergency power backup issues, It required an auxiliary power backup battery, which increased the overall system size. While a lithium-ion battery is an ultra-thin, flexible energy storage device that has advantages over other batteries such as being light in weight, rechargeable, biodegradable, non-toxic, having no leakage, no overheating, having a long life, being easily reusable, and recyclable. This battery description and comparison will be followed and evaluated by a discussion on the ethical issues surrounding the Lithium-ion battery, particularly for renewable and sustainable development.*

Keywords: Battery, Lithium-Ion Battery, Renewable Energy, etc.

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